CLAIMS

1. A radio communication system having a random access channel for transmissions from a secondary station to a primary station, the secondary station having means for requesting allocation of a random access channel resource by transmission of an access preamble at one of a plurality of available time offsets and the primary station having means for receiving the access preamble, for determining its time offset and for transmitting an access acknowledgement indicating whether the requested resource is available, wherein the transmission time offset of the access preamble provides further information regarding the resource allocation request.

2. A system as claimed in claim 1, characterised in that the secondary station has means for transmitting, in response to receipt of the access acknowledgement, a contention resolution preamble at one of the plurality of available time offsets, and in that the primary station has means for receiving the contention resolution preamble, for determining its time offset, and for transmitting a contention resolution acknowledgement indicating whether the secondary station has been granted access to the requested resource.

3. A primary station for use in a radio communication system having a random access channel for transmissions from a secondary station to the primary station, wherein means are provided for receiving an access preamble transmitted by the secondary station, for determining at which of a plurality of available time offsets the access preamble was transmitted, for determining from the access preamble which random access channel resource the secondary station requests to be allocated and for transmitting an access acknowledgement indicating whether the requested resource is available, wherein the transmission time offset of the access preamble provides further information regarding the resource allocation request.

4. A primary station as claimed in claim 3, characterised in that means are provided for receiving a contention resolution preamble, transmitted by the secondary station in response to reception of the access acknowledgement, for determining at which of the plurality of available time offsets the contention resolution preamble was transmitted, and for transmitting a contention resolution acknowledgement indicating whether the secondary station has been granted access to the requested resource.

5. A secondary station for use in a radio communication system having a random access channel for transmissions to a primary station, wherein means are provided for requesting allocation of a random access channel resource by transmission of an access preamble at one of a plurality of available time offsets, wherein the transmission time offset of the access preamble provides further information regarding the resource allocation request.

6. A secondary station as claimed in claim 5, characterised in that means are provided for receiving an access acknowledgement from the primary station indicating successful reception of the access preamble, and for transmitting in response a contention resolution preamble at one of the plurality of available time offsets.

7. A secondary station as claimed in claim 5 or 6, characterised in that use of any one of the plurality of available time offsets results in the transmission of the preamble in advance of the time at which it would be transmitted without the offset.

8. A secondary station as claimed in claim 6, characterised in that the time offsets used for transmission of the access preamble and contention resolution preamble are the same.

9. A method of operating a radio communication system having a random access channel for transmissions from a secondary station to a primary station, the method comprising the secondary station requesting allocation of a random access channel resource by transmission of an access preamble at one of a plurality of available time offsets and the primary station receiving the access preamble, determining its time offset and transmitting an access acknowledgement indicating whether the requested resource is available, wherein the transmission time offset of the access preamble provides further information regarding the resource allocation request.

10. A method as claimed in claim 9, characterised by the transmission time offset indicating the identity of the secondary station.

11. A method as claimed in claim 9, characterised by the transmission time offset indicating the bit rate required by the secondary station.

12. A method as claimed in claim 9, characterised by the transmission time offset indicating the priority of the secondary station's resource request.